

Postdoctoral Position in 3D Concrete Printing and  
Advanced Computational Design  
Louisiana State University (LSU)

Direct Link: <https://www.AcademicKeys.com/r?job=248715>

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Posted Nov. 12, 2024, set to expire Mar. 14, 2025

<b>Job Title</b>	Postdoctoral Position in 3D Concrete Printing and Advanced Computational Design
<b>Department</b>	Department of Civil & Environmental Engineering <a href="https://www.lsu.edu/eng/cee/index.php">https://www.lsu.edu/eng/cee/index.php</a>
<b>Institution</b>	Louisiana State University (LSU) Baton Rouge, Louisiana
<b>Date Posted</b>	Nov. 12, 2024
<b>Application Deadline</b>	Dec. 15, 2024
<b>Position Start Date</b>	Available immediately
<b>Job Categories</b>	Post-Doc
<b>Academic Field(s)</b>	Structural Engineering Robotics Ocean Engineering Naval Architecture & Marine Engineering Mechanical Engineering Manufacturing & Quality Engineering Industrial & Systems Engineering Geotechnical Engineering Mechanics Electrical and/or Electronics Computer Engineering Computer Science Construction Engineering/Management Civil Engineering Chemical/Petroleum Architectural (Building & Construction) Engineering - Other

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**Apply By Email**     [ysu@lsu.edu](mailto:ysu@lsu.edu)

### Job Description

#### Position Overview:

The Department of Civil and Environmental Engineering at Louisiana State University (LSU) invites applications for several postdoctoral positions in 3D concrete printing. This project focuses on pushing the boundaries of additive manufacturing for concrete infrastructure applications, particularly in optimizing materials and processes for large-scale, durable, and efficient construction. This position offers a unique opportunity to work at the intersection of civil engineering, materials science, and computational design.

#### Responsibilities:

- Develop and refine 3D printing processes, with a focus on concrete material formulations and structural optimization.
- Use numerical modeling to evaluate and enhance the mechanical and rheological performance of printed structures.
- Apply data analytics and machine learning techniques to improve printing accuracy, efficiency, and defect detection.
- Design and integrate embedded devices for in-situ monitoring of print quality and structural health.
- Collaborate with interdisciplinary teams to advance next-generation 3D printing technologies for civil infrastructure.

#### Qualifications:

- Ph.D. in Civil Engineering, Mechanical Engineering, Materials Science, or a related field.
- Expertise in 3D printing technologies, particularly concrete printing, with hands-on experience in machine learning and numerical modeling.
- Proficiency in data analytics, mechanical design, and embedded systems for structural monitoring.
- Strong programming skills (Python, MATLAB, etc.) and experience with CAD software.
- Demonstrated ability to publish research in high-impact journals.

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**Salary Range:**

\$60,000 - \$75,000 per year, based on qualifications and experience. Prefer Starting date: between 01/2025- 03/2025

**Application Process:**

Interested candidates should send their CV, cover letter, and references to Dr. Su at [ysu@lsu.edu](mailto:ysu@lsu.edu)

**EEO/AA Policy**

The Department of Civil and Environmental Engineering at Louisiana State University (LSU) is an Equal Opportunity/Affirmative Action Employer. We are committed to creating a diverse and inclusive environment for all employees and applicants. All qualified applicants will receive consideration for employment without regard to race, color, religion, gender, gender identity or expression, sexual orientation, national origin, genetics, disability, age, or veteran status. We encourage applications from underrepresented groups and are dedicated to providing a supportive work environment for all.

**Contact Information**

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

**Contact** Dr. Su  
Department of Civil & Environmental Engineering  
Louisiana State University (LSU)  
Baton Rouge, LA

**Contact E-mail** [ysu@lsu.edu](mailto:ysu@lsu.edu)